

# When Waves Collide: Future Conflict

By RICHARD SZAFRANSKI

*... we may eventually come to agree that a threat to national security means anything on the globe which challenges a people's health, economic well-being, social stability, and political peace.*

—Paul Kennedy<sup>1</sup>

Anyone who has witnessed a fist fight, attended a hockey game, or read history knows that mankind will never attain peace and unity. On the contrary, rivalry, confrontation, and conflict are constants of the human state. Even advocates of information war, cyberwar, and psychological warfare admit that friendly data, controllers, and minds must be protected by the use of force.

Future events are unknown and unknowable, predictions merely guesswork,

and forecasts often nothing more than coherent fiction masquerading as fact.<sup>2</sup> Trends and megatrends, which are linear extrapolations, defy the reality of a world characterized by nonlinearity and exponential change. No one knows with certainty what surprises may lurk in the waves of the future.<sup>3</sup> Yet, domestic and international interests compel us to stretch, look ahead, try to thwart surprise, and be prepared. This article dares to think aloud about conflict in the next millennium.

## Visions of the Future

After decades of confrontation with the Soviet Union, each service announced its vision of the post-Cold War world.<sup>4</sup> Moreover, stirred by a speech that Sam Nunn delivered

## Summary

What eventualities await the Armed Forces now that myriad dangers have replaced a monolithic threat are unknown. While old habits die hard, the weapons systems of the Gulf War will be relegated to the Reserve components. Naval forces will assume center stage, calling on enhanced airpower and spacepower. Ground forces will be smaller but highly mobile. The Air Force will turn to space or run the risk of extinction. New weapons will be smarter, but some ancient varieties will survive. The United Nations will succeed because it must, and the military may be earmarked for exclusive duty as peacekeepers. Special Operations Forces will bear the brunt of the Nation's violent encounters, but precisely how will remain a mystery. Conflict will be keyed on the behavior that we attempt to ensure or expunge, the precise conditions of combat cessation, and the attributes that we want to prevail in a post-conflict world when waves collide.

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on the Senate floor about military redundancy and waste—impelled by rapidly declining budgets and in the wake of the Chairman’s assessment of roles, missions, and functions—Secretary of Defense Les Aspin ordered a bottom-to-top evaluation.<sup>5</sup> The resulting *Report on the Bottom-Up Review: New Forces for a New Era* described the forces required by the services until the end of the century.<sup>6</sup> If there is a unifying thread running through these visionary documents, it is the incredible notion that even in an era of exponential change the future will closely resemble the present or recent past. In other words, it appears that the dinosaur that we know as the Armed Forces hopes to escape extinction or radical alteration by becoming a minidinosaur.<sup>7</sup> It is unlikely that this approach will succeed.

Things *will* change. The Armed Forces are likely to destroy, sell, retire, or slowly give the Reserve components much of their Desert Storm-vintage weapons and equipment. The Reserve and National Guard will preserve and train with them in peacetime employing antiquated tactics to the extent

the Nation may complement armed members of the military with unarmed trainers and technocrats

that obsolete materiel, reduced funding, and piecemeal formations permit. Adversaries, sometimes-friends, and sometimes-allies will take stock of this

situation and factor it into scenarios and defense budgets. The *threat* is gone. We now face only *dangers*.<sup>8</sup>

Will the United States maintain large forces if there is no urgent threat to national survival? It is likely that the American people will eventually think otherwise. Congress may even pass laws limiting the President’s authority as Commander in Chief.<sup>9</sup> The Nation may complement armed members of the military with unarmed ones such as teachers, trainers, technicians, and technocrats plus young people either repaying college loans by national service or striving to be all they can

be. Some unarmed personnel may be trained in martial arts. They would exercise choice, an essential part of recruiting in a segmented society. All forces deployed outside the United States would be guests and their hosts would fully grasp the consequences of acting inhospitably. For the Nation, *access* will be global and electronic while *presence* will be virtual in every major market or forum and real when America so chooses.

#### Forces of the Future

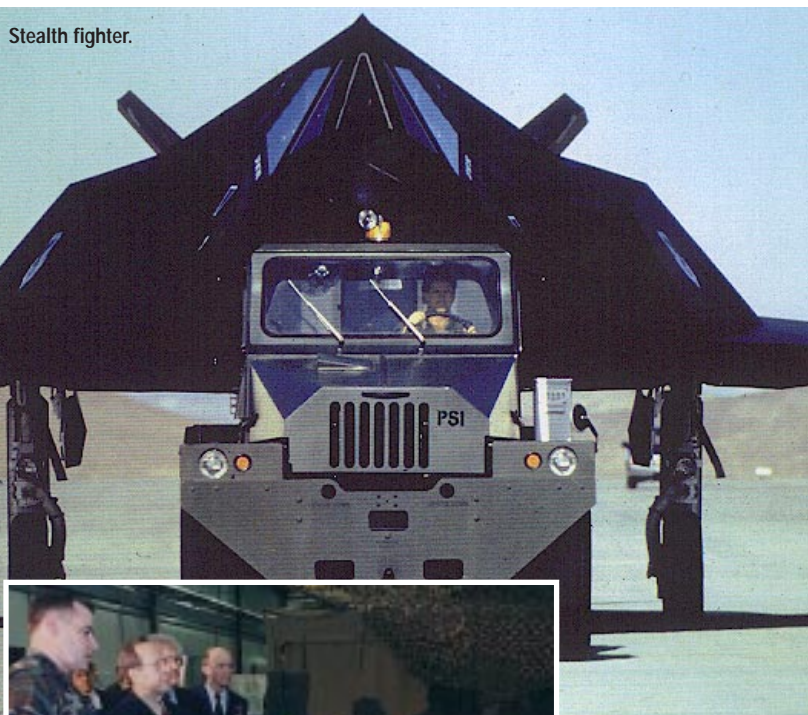
Naval forces may well become the centerpiece of the military. Extraterritorial and mobile, they will remain relatively large as a hedge against congressional limits on executive power. This body, the Nation’s foundation force, will necessarily rely more on air-power and spacepower than it does today. The introduction of stealthy aircraft as well as long-range remotely-piloted and self-defensive atmospheric and stratospheric assets for reconnaissance, electronic warfare, and ground attack join new long-range, precision-guided, beyond-visual-range, ship-to-air and ship-to-ground hypersonic missiles that could capitalize on tactical satellites and tracking and targeting capabilities available to carrier battle groups and flotillas of the future. Embarked Fleet Marine Forces likely will be the instrument of choice for threatening to open and close many, but not all, of the very few public fights. The threat that, when pressed, the United States will “send in the Marines” will still be as compelling in 2020 as it was in 1820 and 1920. The *Semper Fi* force will always be faithful, always hanging on the wall, always ready to face “the barbarians at the gate.”

Other ground forces, a small standing army,<sup>10</sup> will be built around the mobility and relative ease of movement of light infantry to facilitate foreign and domestic missions. Even tomorrow’s organic artillery and tanks will be light enough to be air-deliverable. Artillery will be largely smart rockets or smarter missiles. Tanks will be small, low, compact, autonomated,<sup>11</sup> unmanned mobile gun platforms. Air defense weapons organic at the division level will include antitactical ballistic missile defensive systems and counter-battery engagement systems. Ground defenses will offer defensive counter-air, and air superiority will be organic to ground forces. Smart weapons, launched from the ground or

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Stealth fighter.



U.S. Air Force



The Secretary being briefed at SIMNET Warfighting Complex.

DOD (R.D. Ward)

standoff Army aircraft, will provide what today is understood as close air support, with anti-aircraft defenses rendering the air nearly

too lethal or confusing for pilots. The Army will draw on generations of mind-nimble (not necessarily literate), fingertip-quick youth and their years of experience as heroes and killers in violent, virtually real interactive videos. The multifunctional squad will be a production unit of lethality on the ground. All-weather day and night multi-spectral sensors and precision-guided rounds will replace the iron gunsight and mass-produced rifle of the old paradigm. Nothing will replace the knife, wielded by a cohort of young, hot-blooded killers.

As forces shrink so will the number of bases. Loss of housing, commissaries, exchanges, hospitals, etc., is likely. The bases that survive closure and realignment will evolve. Conversion and consolidation will cause functions like administration, finance, law, education, maintenance, transport, etc., to be automated, privatized, or done by prison labor. Out-sourcing and downsizing will be the buzzwords of the day. The force

that survives will meet itself going and coming from deployments that keep the United States engaged in the world.

Some of our best forces—though not the very best—may serve with the United Nations as there will be no alternative to making the current ineffective unifying architecture effective. If there is large-scale conflict, it will almost certainly involve coalition warfare. Day-to-day experience in smaller, less violent coalition operations will help insure the success of larger, more violent ones. Member nations will charge multinational, multifunctional U.N. forces with counterproliferation, transportation, on-site inspection, and environmental cleanup—including radiological, chemical, and biological—as well as enforcement of the peacekeeping dictates of the family of nations. Their existence will evolve as America comes to understand and accept the big needs for the management of collective security on a small planet.

What of the Air Force? Airpower and spacepower are at the heart of the roles, missions, and functions debate.<sup>12</sup> Some observers warn that the Air Force as the only service without any pre-Cold War experience may not survive.<sup>13</sup> It was founded to help contain Soviet expansion by threatening long-range nuclear bombardment.<sup>14</sup> The Soviet Union is gone. Containment by threat of nuclear weapons is also gone. What perhaps has gone as well is the *raison d'être* for a separate air force. Small aircraft with a tactical function and bombers designed to deliver nuclear weapons may be reorganized into non-nuclear composite wings that mimic smaller air wings of carrier battle groups. But it is no longer apparent that the Air Force—with its unshakable dependence on and preference for human fighter pilots and jet-delivered air supremacy—has irreplaceable utility. The transport and aerial refueling functions must and will survive, but it is arguable whether these alone can provide sufficient justification for preserving a separate air force. Long-range naval airpower can protect air-delivered forces in transit. Unless the Air Force becomes *the* space force, it may not survive beyond 2010. Since a better organized space force is required, the window of opportunity for the survival of the Air Force may be fleeting. Will it grasp the opportunity?



Performance may be a good—though not flawless—indicator of future prospects. Aircraft acquisition has a checkered record since the development of the F-16. Procurement problems with the C-17 program, the cost of the B-2, the always-under-modification B-1B, depots that compete with a private aerospace industry at a time of defense conversion, and the beyond-air-supremacy

military, civil, and commercial space assets will be combined to command the electromagnetic spectrum

F-22 have drawn much attention. None of it seems favorable. The Army wants more predictable, better coordinated close air support.

Some Navy and Marine aviators have their own views on the Joint Force Air Component Commander. The success of the Desert Storm air campaign threatens to become a liability to the Air Force as brilliant but seemingly thoughtless “air alone” airpower advocates take up their pens or speak out. Their arguments sound increasingly desperate. To the other services, perhaps only the Air Force Air Mobility Command has lasting value.

Critics also portray military spacecraft acquisition and launch functions as disappointing. Parochial blue ribbon panels and special studies have done little beyond adding more arrows to the quivers of skeptics. Wonderful satellites have not been complemented by equally wonderful data distribution systems. Military space customers in an era of quality cannot all be called satisfied. Moreover, they do not even know to which command to register complaints. Do they take them, they wonder, to the Air Force space command in Los Angeles that does acquisition, the one in Dayton that does procurement, or perhaps the one in Colorado Springs that does planning and some (by no means all) operations? It depends, they learn, on the specific spacecraft or problem. This is not just an Air Force issue. It appears there are as many space forces as there are air arms. Yet the time to abandon much of the air and contentious “aerospace” for space may be now for the Air Force.

The Air Force may, for whatever reason, let this opportunity get away. Then what? Since the Army has the longest association with rockets and missiles, it can together with NASA and the private sector place large satellites in orbit on schedule. This would

not appear to be disagreeable to the Navy, as *Sonata*—the service’s space and electronic warfare vision for the future—seems to indicate.<sup>15</sup> Both the Army and Navy could launch smaller “tactical” satellites on demand. It is unlikely that Congress or the international community will assent to building, let alone deploying, space-to-earth strike weapons. Armaments may leave the earth and *transit* space, but the United States will probably never find the resolve to station arms *in* space. Navigation, communications, and surveillance activities will likely remain the limits of space-based capabilities. Even though we are nowhere near the limits of those capabilities, the boundaries are not being pushed by the Air Force or any of the military space commands, but instead by industry. There is money to be made by providing communications, navigational information, and products of space-based surveillance. The private sector, with its ability to satisfy customer demands and turn a profit, may ultimately provide most of the “space command” the United States needs.

The most likely course is that military, civil, and commercial space assets will be combined to command the electromagnetic spectrum. Such a partnership would create a



virtual, interactive space-to-earth and earth-to-space data- or infosphere.<sup>16</sup> Micro-miniaturization, nano-technology, advances in super-computing, artificial intelligence, future lasers and fiber optics, and computer-graphic integration would make cyberwar and information war the distinguishing features of future conflict.<sup>17</sup> It would be possible to construct an alternative truth from the infinite combinations that zeroes, ones, and pixels allow. Knowing the real truth would require access to, and verification by, multiple phenomena. Targeteers and combatants would both need topsight to confirm that a tank or building is neither a hologram nor visual consequence of an adversary's insertion into our data stream. That technologies and discoveries fail to come together before the realization that our guess about major regional contingencies was wrong (albeit politically necessary) does not mean that they will not follow apace. We may have to fight before they come together.

The jewel in the military's crown will be U.S. Special Operations Command (SOCOM). It will perform international housekeeping and wet-work. Special Operations Forces (SOF) are the first truly joint and combined forces and the most elite in the Nation, perhaps the world. Capable of precisely applying technologically superior weapons and novel

tactics, SOF still will be able to effectively conduct the age-old tradition of hand-to-hand combat. Suitable for nonlethal use against a high-tech foe, SOF will also employ tremendous violence to deal with terrorists, brigands, drug-traffickers, and pirates. They will be compensated generously for the ability to kill reliably and the repeated willingness to take calculated risks. They will form an indistinct image of terror looming just below the level of consciousness of a political adversary. The United States will use them to solve small problems rapidly and bring bigger ones to closure suddenly. SOCOM will continue to have its small, highly specialized, and forever-out-of-the-mainstream air force. What SOF do and how they do it will remain a mystery to many Americans including members of the Armed Forces.

Beyond the Horizon or Over the Edge?

If you are a military realist it should not seem odd to define forces and discuss them *before* determining the conflicts which they will face. If you are not a realist, however, consider the facts. America usually defines the functions of forces *after* fixing their size and form. Strategy—or what passes for it—also follows the budget determinations on the size of forces which the services then try to shape separately. It is illusory to expect anything else. But in the future the United States must better rationalize its forces because of the different kinds of conflict that will arise.

What forces will affect nations? There will be a wider gap between rich and comfortable, on the one hand, and poor and miserable, on the other. Acquisitiveness will drive the world, the rich seeking a constantly improving quality of life and the less-rich seeking the means for greater wealth. Theft will be a problem. The biomass will move toward depletion as more and more people crowd the planet. We will not leave earth for life elsewhere. We dwell on a rather comfortable and certainly habitable rock spinning in deep space. Unless there is the promise of acquiring greater wealth on another rock, we will stay on this one.<sup>18</sup> As we become more crowded and compete for resources and the means of production, we



Air Force SWAT Team.

U.S. Air Force (Robert Wickley)

will continue to affect the weather and pollute the air and water. Failed nuclear reactors, episodes of serious cross-border environmental pollution, and squabbles over water rights in the Indus Valley and along the Tigris and Euphrates will fuel some fights. Extremist factions will have many opportunities to do battle. If cold fusion replaces fossil and nuclear fuels, many will covet the discovery, and the definition of “have not” could change overnight. What will the Gulf Cooperation Council find to cooperate about if oil is less valuable or nearly worthless? When that possibility dawns on them, will they more actively pursue the celebrity status that acquisition of nuclear weapons allows? Will they seek big—maybe even too big to tolerate—oil profits in the near term, expecting devastating losses later? Are there not already some sources of conflict in that region?

If one believes, as Martin van Creveld does, that the era of trinitarian warfare has ended, or that hyperwar, parallel war, or the revolution in military affairs will deter large-scale warfare, it is wise to anticipate different kinds of conflict.<sup>19</sup> In addition to war on the mind, future conflict is likely to be more homeopathic or antidotal. This means that a small, standing, hyperprofessional force will in actuality be the Nation’s *first* and *last* line of defense. A militia is a fine tradition, but the cost of training and technology along with difficulties in mobilizing and mainstreaming such a politically-potent force will insure their obsolescence for extraterritorial combat.<sup>20</sup> Consequently, U.S. forces must fight earlier, more covertly, and more often than in the past. Moreover, combat may be, as van Creveld implies, more against non-state groups than with states. As the world gets smaller and more crowded, armed elements of both the United Nations and SOCOM may intervene more quickly to prevent catalytic conflict. (Hence, the terms homeopathic and antidotal.) Many, perhaps most, engagements will be small and aimed at group leaders and elite guards surrounding them. These engagements will be risky and ferocious. They will be won or lost in darkness or bad weather. If the United States, alone or with partners, is unable to use less violent political and economic instruments to compel good behavior, the next action will come from the sea, even if air and space

are the enabling media. SOF are expert at “getting in, getting done.” If, however, they are frustrated and we are unwilling to let them die in place or be tried in foreign lands as criminals (before the eyes of CNN), it will take heavier regular forces to bail them out. SOF very likely will have to learn to bail themselves out.

There are three paramount questions about future conflict: What is the *specific* behavior we want to compel or prevent? What are the *specific* criteria for conflict termination? What *specific* characteristics do we desire a post-conflict environment to have? While the answers determine the targets, reversibility of means employed, and limits of force needed, they are not posed in national military strategy. Unless these political questions are answered for the military leadership, killing and destruction are likely to do more harm than good. That it would be foolhardy to undertake any combat without clear objectives and an unclouded vision of the post-conflict environment does not suggest that the United States will suddenly become immune to episodes of stupidity. It suggests, however, that indiscreet behavior could be catastrophic. Whatever we give up or fail to acquire, our forces must maintain and enhance the capability for coordinated action inside an adversary’s “decision loop.”<sup>21</sup> Some military actions in the future may be as difficult as they are chilling.

It is especially difficult to ponder actions that are anti-traditional. Might not Americans harden their hearts further if they are convinced that *their* wealth or *their* quality of life are at risk?<sup>22</sup> Will they be hardened to the point of sealing borders to keep out the starving, confine cannibalism or internecine warfare to hungry or warring states, or violate another nation’s sovereignty, maybe even seizing nuclear weapons or the means of producing weapons of mass destruction as part of a counterproliferation strategy? Many would probably decline to participate in such actions while some would take part. Given *lawful* orders, members of the Armed Forces must do as ordered. Even so, this might not be work for amateurs or citizen-soldiers who are much more citizen than soldier. It might be more suited to mercenaries



or hyper-professionals. Given a choice between those two terms, citizens probably will call such forces hyper-professionals. Comforting as the term sounds, it may epitomize a distinction without much difference. But since the Nation could command the future's datasphere, it could also portray unsavory realities any way it likes.

Arthur Clarke takes a rather more optimistic view. Proliferation of global information and communications, the sub-meter resolution in Peacesat pictures of the earth, and awareness that conflict is self-destructive could enlighten the minds

America will not need vast forces to protect the Nation or police planet Earth

of the world.<sup>23</sup> If so, America will not need vast forces to protect the Nation or police planet Earth. But even though the future may transform war, it will not likely eliminate it.<sup>24</sup> People are not moving toward enlightenment in lockstep. While the United States may be alert to the danger of environmental pollution, for example, slash-and-burn developing nations appear to have few such concerns. Thus this country will face others who are, or who are trying to be, the mirror-image of the Nation ten, twenty, thirty, or more years ago. America developed nuclear weapons and then used them in combat. It became a great power. Even though the linkage is coincidental and not causal, might not others see arms as paving the way to greatness, or at least to greater self-determination? When these waves collide, what will be the consequences?<sup>25</sup>

Wild cards fill the deck. America appears to lack the political will to name the trump suit. Indeed, it is doubtful that it could any longer even if it did have the will. Demographic shifts and changes in the United States will make the House of Representatives in the year 2020 far different from the group of middle-aged Caucasian males that formerly governed or sought to govern. How these yet-to-be-elected members will vote on North-South or East-West issues makes the course of policymaking and lawmaking difficult to predict from the vantage point of 1995. How these future representatives of the people will constitute or employ the Armed Forces may differ in ways no one can anticipate. This is not to lament change, merely to note that it is likely to affect the military.

What are the limits of optimism? It is restricted by awareness that though humans may be, in Shakespeare's words, the paragon of animals, they do have an animal side nonetheless. What are the limits of cynicism? At the extreme are three thoughts. First, the Nation will not intentionally render itself militarily impotent. Plato's observation that only the dead have seen the end of war is no doubt true. Second is the awareness that the United States is more often smart than stupid. Lastly, we can possess the certain knowledge that nothing is ever as good as it seems or as bad as it might be. Things could turn out fine. No one knows. But waves *will* collide and we will be transformed in the process. Thinking about how to cope now is preferable to being surprised later. In the end, the biggest conflict in the next century is likely to be the one within ourselves. JFQ

#### NOTES

<sup>1</sup> Paul Kennedy, *Preparing for the Twenty-First Century* (New York: Random House, 1993), pp. 129–30.

<sup>2</sup> Charles W. Taylor, *A World 2010: A New Order of Nations* (Carlisle Barracks, Pa.: Strategic Studies Institute, U.S. Army War College, 1992). The documentation on pages 79–90 suggests that such unanalytical forecasting is guesswork.

<sup>3</sup> Alvin Toffler, *The Third Wave* (New York: William Morrow and Company, 1980). The idea of waves or ripples emanating from different societies is quite descriptive and has great diagnostic value. See also Alvin and Heidi Toffler, *War and Anti-War: Survival at the Dawn of the 21<sup>st</sup> Century* (Boston: Little, Brown and Company, 1993).

<sup>4</sup> These were *Land Warfare in the 21<sup>st</sup> Century* for the Army, . . . *From the Sea* for the Navy, and *Global Reach-Global Power* for the Air Force. See also Tom Donnelly, "Services Outline Their Futures in High-Stakes Era," *Army Times*, April 26, 1993, p. 25.

<sup>5</sup> Sam Nunn, "The Defense Department Must Thoroughly Overhaul the Services' Roles and Missions," *Vital Speeches*, vol. 20 (August 1, 1992), pp. 717–24. See also Barton Gellman, "Senator Nunn Questions Military Duplication," *The Washington Post*, July 3, 1993; "Aspin Gently Criticizes Powell Report," *The Washington Post*, March 30, 1993, p. 6; and Les Aspin, "Chairman's Report: A First Step," *Defense* 93, issue no. 2 (July 1993), pp. 24–25.

<sup>6</sup> U.S. Department of Defense, *Report on the Bottom-Up Review: Forces for a New Era* (Washington: Department of Defense, September 1, 1993).

Internet users who want to share their thoughts on "When Waves Collide" with the author can forward them to: [rsz@au.af.mil](mailto:rsz@au.af.mil)



<sup>7</sup> This description of inappropriate responses to change demanded at "the bifurcation point" is used by Alvin and Heidi Toffler. See also Ilya Prigogine and Isabelle Stengers, *Order Out of Chaos: Man's New Dialogue with Nature* (Boulder, Colo.: New Science Library, 1984), pp. 171–76, 297–313.

<sup>8</sup> *Bottom-Up Review*. See also Les Aspin, "Four Challenges to the New World Order," *Defense Issues*, vol. 8 (February 1, 1993), p. 2. *Dangers* have now replaced *threats*; and *peace operations*, *engagement*, and *enlargement* must be added to the strategic lexicon.

<sup>9</sup> Carroll J. Doherty, "Clinton Calms Rebellion on Hill by Retooling Somalia Mission," *Congressional Quarterly Weekly Report*, vol. 40 (October 9, 1993), pp. 2750–51; Pat Towell, "Behind Solid Vote on Somalia: A Hollow Victory for Clinton," *Congressional Quarterly Weekly Report*, vol. 41 (October 16, 1993), pp. 2823–27; and "Clinton's Policy Is Battered, But His Powers Are Intact," *Congressional Quarterly Weekly Report*, vol. 42 (October 23, 1993), pp. 2896, 98. For a discussion of the War Powers Act, see Gary M. Stern and Morton H. Halperin, editors, *The U.S. Constitution and the Power To Go to War: Historical and Current Perspectives* (Westport, Conn.: Greenwood Press, 1994).

<sup>10</sup> In a dinner speech at the Air War College Class of 1994 Dining Out on October 22, 1993, General Ronald A. Fogleman, then Commander in Chief of U.S. Transportation Command, pointed out that large standing forces are an anomaly in America.

<sup>11</sup> Taiichi Ohno, *Toyota Production System: Beyond Large-Scale Production* (Cambridge, Mass.: Productivity Press, 1988). Autonomated machines are both automated and semi-autonomous, with some level of artificial intelligence built in.

<sup>12</sup> Richard Szafranski, "Annulling Marriages: Reframing the Roles, Missions, and Functions Debate," *Airpower Journal*, vol. 7, no. 4 (Winter 1993), pp. 55–67.

<sup>13</sup> Lowell Wood, "The U.S. Air Force in 2020," written address, October 27, 1993, pp. 16–25.

<sup>14</sup> Mark Clodfelter, *The Limits of Air Power* (New York: The Free Press, 1989), pp. 7, 11–25, 35–37.

<sup>15</sup> Jerry O. Tuttle, *Sonata* (Washington: Department of the Navy, 1993), p. 1. The author proclaims the arrival of a new kind of warfare called space and electronic warfare (SEW). *Sonata* assumes the availability of space lift to enable its vision of SEW.

<sup>16</sup> Martin C. Libicki and James A. Hazlett, "Do We Need an Information Corps?" *Joint Force Quarterly*, no. 2 (Autumn 1993), pp. 88–97. This corps may be an attempt to inflict a new idea on force-structuring. Information war may ultimately prove to have more dire consequences than nuclear weapons.

<sup>17</sup> John Arquilla and David Ronfeldt, "Cyberwar Is Coming!" *Comparative Strategy*, vol. 12, no. 2 (April–June 1993), pp. 141–65. The great threat of strategic cyberwar is its dependence on successfully creating and sustaining lies. If a democracy uses cyber-weapons and information warriors, its citizens may never again be confident in their relationship with the government. See Gregory Bateson, "The Cybernetics of 'Self': A Theory of Alcoholism," *Steps to an Ecology of Mind* (New York: Random House, Ballantine Books, 1972), pp. 314–20. See also Eric Voegelin, "Necessary Moral Bases for Communication in a Democracy," *Problems of Communication in a Pluralistic Society* (Milwaukee: Marquette University Press, 1956), pp. 53–68.

<sup>18</sup> Bill Wisher, the screenwriter for *Terminator 2*, shared this insight: unless this planet becomes uninhabitable or space offers sources of wealth unavailable on earth, there is no reason to abandon our home.

<sup>19</sup> Both Martin van Creveld, *Transformation of War* (New York: The Free Press, 1991), and the Tofflers, *War and Anti-War*, see conflict with non-state groups as an emerging threat or danger. Trinitarian warfare is based on Clausewitz's notion of the "remarkable trinity" of government, military, and people.

<sup>20</sup> To be effective the Reserve components must be organized, trained, and equipped with the same rigor as the active components.

<sup>21</sup> John R. Boyd, "A Discourse on Winning and Losing," August 1987. This analysis of strategy, tactics, and the operational art led to the so-called OODA loop—a cycle of observation, orientation, decision, and action.

<sup>22</sup> Linda Kleindienst and Bill Gibson, "Chiles Plans to Sue U.S. Over Immigrants' Impact," *The Orlando Sentinel*, December 29, 1993, pp. A–1, 4.

<sup>23</sup> Arthur C. Clarke, *How the World Was One: Beyond the Global Village* (New York: Bantam Books, 1992).

<sup>24</sup> Desmond Morris, *The Naked Ape: A Zoologist's Study of the Human Animal* (New York: McGraw-Hill, 1967). See also Will and Ariel Durant, *The Lessons of History* (New York: Simon and Schuster, 1968), and Robert L. O'Connell, *Of Arms and Men: A History of War, Weapons, and Aggression* (New York: Oxford University Press, 1989).

<sup>25</sup> Richard Eckersley, "The West's Deepening Cultural Crisis," *The Futurist*, vol. 6 (November–December 1993), pp. 8–12. See also Alvin and Heidi Toffler, *War and Anti-War*, pp. 248–52.